

Commonwealth of Kentucky
Division for Air Quality
EXECUTIVE SUMMARY

FINAL

Title V, Operating

Permit: V-07-036

AK Steel-Ashland Works-Coke Plant

Ashland, Kentucky 41105-0191

June 16, 2008

Babak Fakharpour, Reviewer

SOURCE ID: 21-019-00027

SOURCE A.I. #: 43192

ACTIVITY ID: APE20040001

SOURCE DESCRIPTION:

AK Steel Coke plant is a by-product, coke production facility located at 400 East Winchester Avenue in Boyd County, Kentucky.

Coal is unloaded from railcars, transferred from storage, mixed, crushed, and charged to the coke ovens via belt conveyors and larry cars. The coke oven battery #3 is made up of a row of 76 individual ovens that are 4 meters high. Coke oven battery #4, has 70 ovens which are 5 meters tall.

In the coking process, coal is cooked, driving off volatile compounds from the coal as gases, to form carbon-rich coke. The byproduct gases are recovered and then the clean coke oven gases are used as fuel for heating the coke ovens and boilers.

Coal is charged through the three charge holes on the top of each oven by a technique called “staged charging”. When the conversion of coal to coke is complete, the oven is disconnected from the gas collecting main and the coke is pushed out of the “coke side” of the oven into a rail car. The rail car with the hot coke is moved to the quench area where the hot coke is flooded with water.

There are other secondary activities at the source that include storage tanks, and waste water treatment plant to treat the weak ammonia liquor generated from the coke by-product plant and recycle acid gas back to the sulfur recovery unit.

The facility is a Title V major source of particulate matter, sulfur dioxide, nitrogen oxides, volatile organic compounds, carbon monoxide, and HAP emissions. This source is located in an attainment area for all pollutants except for Ozone (8 hour) and PM_{2.5}.

U.S. EPA REVIEW:

The U.S. EPA was notified of the issuance of the proposed permit on February 22, 2008 via e-mail. The comment period expired 45 days from the date of e-mail. Comments were received from U.S. EPA on March 26, 2008. Minor changes were made to the permit as a result of the comments received; however, in no case were any emissions standards, or any monitoring, recordkeeping or reporting requirements relaxed. A detailed explanation of changes made to the permit is documented in the Comments and Response document. The permit is now being issued final.